SPECTRUM®

# NBR-620, NBR-420 and NBR-220 Management Module Guide

CABLETRON SYSTEMS

The Complete Networking Solution™

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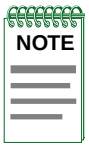
## Chapter 4 Event and Alarm Messages

# Preface

The Management Module Guide for the Cabletron Systems NBR-620, NBR-420, and NBR-220 serves as a reference guide for the corresponding management module software. Use this guide if you are going to model and monitor an NBR-620, NBR-420, or NBR-220 through SPECTRUM. Before reading this manual, you should be familiar with SPECTRUM's operations. You should also be familiar with any network management and hardware requirements described in the related hardware documentation.

## What is in This Guide

The following chapter descriptions outline the organization of the *NBR-620, NBR-420, and NBR-220 Management Module Guide*.




*Throughout this manual, the NBR-620 is used as an example to represent all three NBR devices (NBR-620, NBR-420, and NBR-220).*

| | |
|---|---|
| Chapter 1<br>**Introduction** | Describes the NBR-620 management module and model types. |
| Chapter 2<br>**Device View** | Describes the Device View's three different representations of an NBR-620. |
| Chapter 3<br>**Configuration Views** | Describes the configuration views for the NBR-620 model and the device-specific management information provided by each view. |
| Chapter 4<br>**Event and Alarm Messages** | Contains a listing and explanation of the alarm/event messages generated in the Event Log or Alarm View for the NBR-620 model type. |

# Conventions

In this manual, the following conventions are used.

- Command names are printed in **bold**; for example, **Clear** or **Save & Close**.
- Menu selections to access a view are printed in **bold**; for example, **Configuration** or **Detail**.
- Buttons are represented by a shadowed box; for example, **Help**.

# Related SPECTRUM Documentation

When using this guide, you should have a clear understanding of SPECTRUM functionality and navigation techniques as described in the Administration, Operation, and following documentation:

*SPECTRUM Report Generator's Reference*

*Getting Started with SPECTRUM for Operators*

*Getting Started with SPECTRUM for Administrators*

*How to Manage Your Network with SPECTRUM*

# Other Related Documentation

Refer to the following documentation for more information on managing TCP/IP-based networks and the NBR-620:

*LAN Troubleshooting Handbook*, Mark Miller (1989, M&T Publishing, Inc.)

*The Simple Book — An Introduction to Management of TCP/IP-based Internets*, Marshall T. Rose, Performance Systems International, Inc.

*Computer Networks*, Andrew S. Tanenbaum, Prentice-Hall, Inc.

*Local Area Networks, Architectures and Implementations*, James Martin & Kathleen K. Chapman for the Arben Group, Inc. (1989, Prentice-Hall, Inc.)

*NBR-620/NBR-420/NBR-220 Installation Guide*, Cabletron Systems, Inc.

*NBR-620/NBR-420/NBR-220 Local Management Guide*, Cabletron Systems, Inc.

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# Chapter 1

# Introduction

## What is in This Chapter

This chapter describes the SPECTRUM Management Module for the NBR-620. It also provides the model type name assigned to the NBR-620 in SPECTRUM. The model type name refers to the template used to specify attributes, actions, and associations for device models in SPECTRUM.

## NBR-620 Management Module

The SPECTRUM NBR-620 Management Module manages NBR-620 devices using the SNMP network management agent. SPECTRUM bases its management of these devices on the Management Information Bases (MIBs), which come as part of the management module. There are three SPECTRUM model type names for NBR-620 Devices, described as follows:

**BRtrCSINBR620**: A Cabletron Systems Six-Port Intelligent Bridging Routing Module supporting two Bridging Routing Interface Module (BRIM) interfaces and four Ethernet Port Interface Modules (EPIMs).

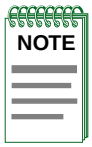
The other two models, NBR-420 and the NBR-220, use the same model type as the NBR-620, BRtrCSINBR620. The NBR-420 has one BRIM interface and two EPIMs. The NBR-220 has two EPIMs and does not support UPS or Modems. Once the model type has been added, the device is queried and the appropriate number of ports are displayed.

# SPECTRUM and the NBR-620

TheNBR-620 is a multi-port intelligent bridging module.The NBR-620 has two Bridging/Routing Interface Module (BRIM) slots. A BRIM performs the same bridging functions as an EPIM: it transfers packets between different channels. However, unlike EPIMs, BRIMs bridge these packets from one transmission type to another (e.g., Ethernet to FDDI network backbones, etc.). Possible BRIMs are as follows:

- BRIM-F6: FDDI Dual Attached Station (DAS) connection (currently supported)
- BRIM-E6: Ethernet module with selectable media connections
- BRIM-W6: Wide Area Network connection
- BRIM-T6: Token Ring connection
- BRIM-A6: Asynchronous Transfer Mode connection

To  model this device, create LAN_802_3 models representing each network that the NBR-620 is bridging and connect them to the NBR-620 icon. The software “connects” an ethernet icon to each of the ethernet ports (Channels A, B, C, and D) and places them in the NBR-620 Device Topology (DevTop) View. You can then copy these icons into the LAN_802_3 icons to allow performance statistics to be gathered on each LAN_802_3 subnet. Figure 1-1 shows a possible NBR-620 configuration in SPECTRUM.

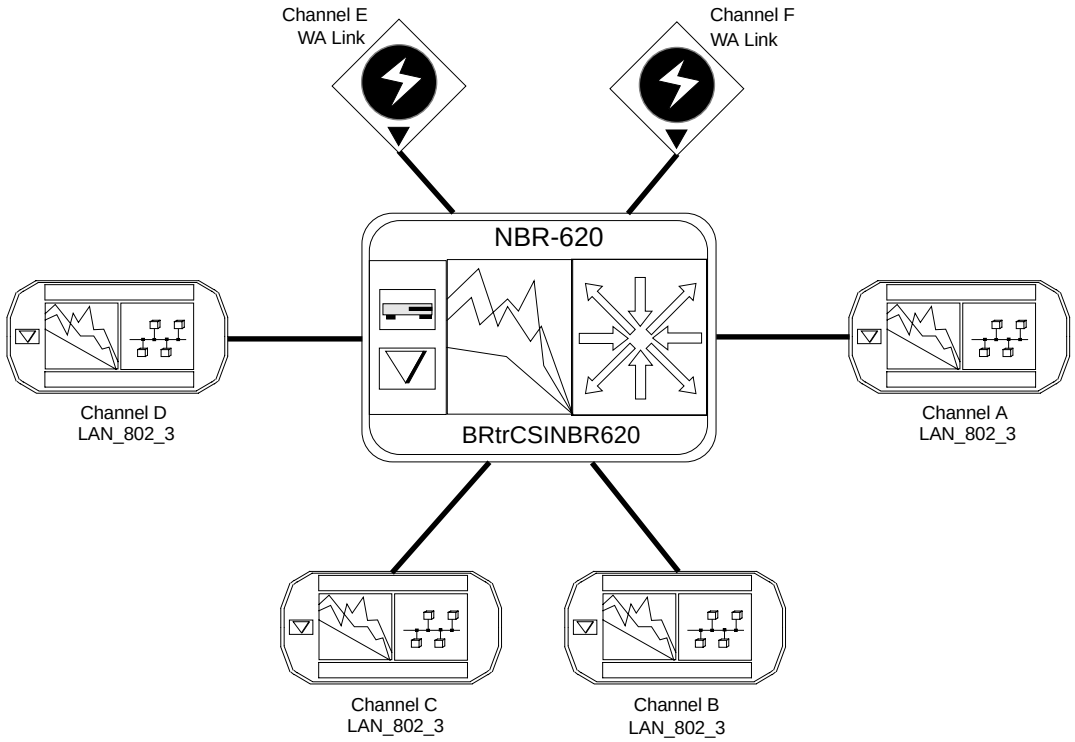



*If you are running a previous version of SPECTRUM, the following user interface aspects may differ from those in SPECTRUM version 4.0:*

- *Order and names of menu selections*
- *Navigational features (mouse button functionality)*

*For information about menu selections and navigating within previous versions of SPECTRUM, refer to the* SPECTRUM System User’s Guide*. For more information about menu selections and navigating within SPECTRUM version 4.0, refer to the* SPECTRUM Views reference*.*

**Figure 1-1. Example of an NBR-620 Model Configuration**




SPECTRUM management of an NBR-620 is based on the following Management Information Bases (MIBs) which come as a part of the software module for the model type:

- IETF MIB II (RFC 1213)
- IETF Bridge MIB (RFC 1286)
- IETF FIB MIB (RFC 1354)
- IETF FDDI MIB (RFC 1512)
- Chassis MIB
- CtBridge MIB
- Ctdownload MIB
- Ctmib2ext MIB
- Ctsmt MIB
- CtupsMIB
- IP Services MIB
- Router MIB
- Trap Table MIB

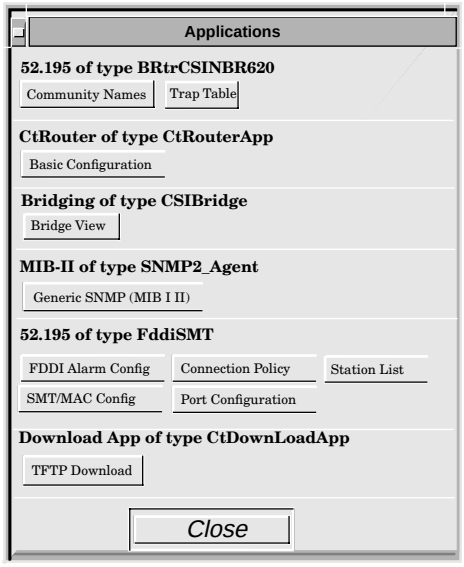
# SPMA and the NBR-620

SPECTRUM includes SPMA (SPECTRUM Portable Management Application) for the NBR. SPMA functionality is available from the Utilities Submenu, which can be accessed from any SPECTRUM view. To open the Application View, which provides access to SPMA management, do the following:

1. Select **Icon Subviews** from the View Menu or click the middle mouse button on the NBR-620 icon.
2. Select **Utilities** from the Icon Subviews Menu.
3. Select **Application** from the Utilities Menu.

The Application View provides buttons to select SPMA-specific views and dialog boxes. Figure 1-2 provides an example of a typical Application View.

**Figure 1-2. Application View**




Information on the function of specific SPMA applications can be found in the SPMA books provided with SPECTRUM.

For details on the Bridge View refer to the following chapters in *SPECTRUM Portable Management Application for the NBR-620*:

- Chapter 2, *Using the NBR-620 Bridge View,* provides detailed instructions for configuring and managing the NBR-620's bridging capabilities,

including monitoring bridge operation, using the special and filtering databases, and setting forwarding thresholds and notification options.

For details on Generic SNMP (MIB I II), Community Names, TFTP DownLoad, and Trap Table, refer to the following chapters in the *SPECTRUM Portable Management Application Tools Guide*:

- Chapter 2, *Using the MIB I, MIB II Tool*, explains how to use this tool to view and change MIB I and MIB II object ID values. You can use the MIB I, MIB II Tool on any device, including non-Cabletron devices, that supports MIB I or MIB II.
- Chapter 3, *Using the Community Names Tool*, explains Cabletron's "Component" structure of device MIBs, and describes how to change device community names.
- Chapter 5, *Using the TFTP DownLoad Tool*, explains how to upgrade firmware on Cabletron devices equipped with Flash EEPROMs.
- Chapter 6, *Using the SNMP Traps Tool*, explains how to establish which management stations on your network will receive trap alarms from a selected device, and also provides a brief overview of some of the traps supported by Cabletron Systems' devices.

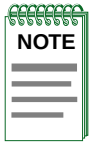
If a BRIM-F6 is installed in an NBR, additional options are available through the SPMA Applications View. For details on these FDDI functions, refer to the following chapters in the *SPECTRUM Portable Management Application for the Bridge/Router Interface Modules (BRIMS) User's Guide*:

- Chapter 4, *Viewing Port Configuration*, describes the various fields within the Port Configuration window. It also describes how to enable or disable BRIM ports, and discusses the Port Chart and Port Meter, both of which are accessible from the Port Configuration window.
- Chapter 5, *Alarm Configuration*, describes the various fields within the Alarm Configuration window and discusses setting alarm thresholds.
- Chapter 6, *SMT/MAC Configuration*, describes the various fields within the SMT/MAC Configuration window. It also discusses the MAC Chart and the MAC Meter, both of which are accessible from the SMT/MAC Configuration window.
- Chapter 7, *Configuring the SMT Connection Policy*, discusses the legal connections allowed among the four FDDI port types: A, B, M (Master), and S (Slave).
- Chapter 8, *Viewing the Station List*, discusses how to use the Station List to view stations on the ring, and their positions in relation to the monitored device.

# NBR-620 Applications

The NBR-620 supports both common and device-specific applications described in the *MIB II Applications, Bridging Applications, and Miscellaneous Applications* references. SPECTRUM management of the NBR-620 is based on the following common and device-specific applications:

- Bridging (CSIBridge)
  - Spanning Tree (Ct_Stp_App)
  - Transparent (Transparent_App)
  - Ethernet Special Database (Ct_BdgEnet_App)
  - Static (Static_App)
- MIB-II (SNMP2_Agent)
  - IP (IP2_App)
  - System (System2_App)
  - ICMP (ICMP_App)
  - UDP (UDP2_App)
- Download App (CtDownLoadApp)
- FDDI (FddiSMT)

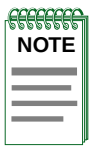



*The FDDI application appears only if a BRIM-F6 is inserted in the NBR-620.*

The following major application models are also available if you have purchased the associated services:

- Routing Services (CtRouter)
- DLM (DLM_Agent)
- Standard RMON (RMON App)

Refer to the documentation provided with the RMON, DLM and Routing Services for descriptions of these capabilities.




*If there is an Uninterruptable Power Supply (UPS) connected to your device, CtUPS_App will show as a major software application.*

# Chapter 2

# Device View

## What is in This Chapter

This chapter provides a description of the Device View for the NBR-620 Management Module, including a description of how to use the Interface, Physical, and Chassis Device Views.

- The Chassis View displays a logical view of the NBR-620 device and its interfaces. From this view you can access performance, configuration, and status information about the bridge, ethernet and BRIM ports.
- The Interface View displays a logical view of the NBR-620's interfaces and provides access to information on their performance, status, and configuration.
- The Physical View displays a physical representation of the device. This view provides access to module information only.

## Chassis Device View

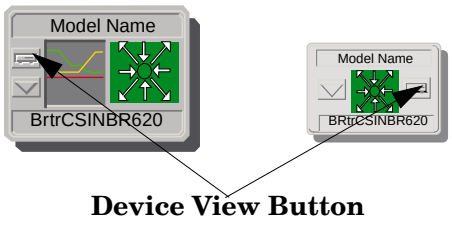
This section describes the information available from the NBR-620 Chassis Device View.

The Chassis Device View's representation of the NBR-620 includes smaller icons representing the ports and applications of the NBR-620. These port and application representations provide access to detailed information about the module, the repeater stack, bridging, and the ports. Figure 2-1 displays a detail view of the NBR-620 Chassis (Logical) Device View's logical module representation and the menu selections available by clicking the right mouse button on each zone of the module.

# Accessing the Chassis Device View

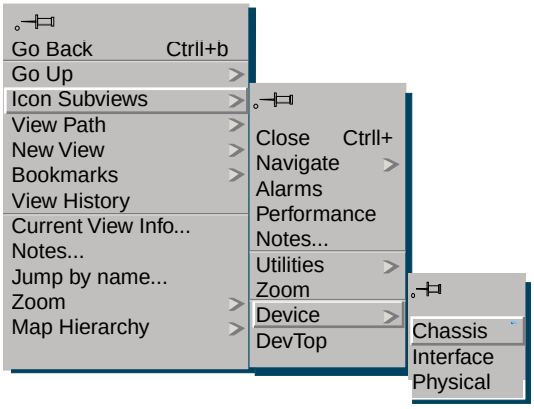
The Chassis Device View is accessed using one of the following methods:

- Double-click on the Device View button of the NBR-620 device icon. This will open the Device View that was opened last (i.e., Chassis, Interface or Physical).




**Device View Button**

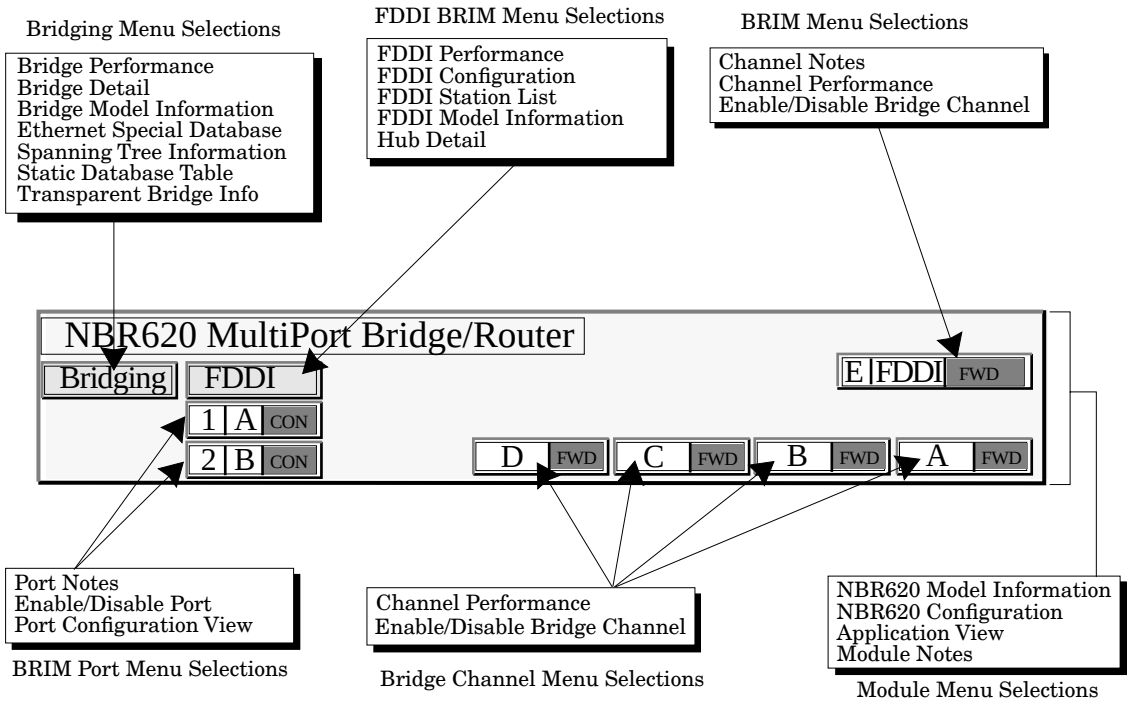
- Highlight the NBR-620 device icon and select **Device -> Chassis** from the Icon Subviews menu.



# NBR-620 Logical Module Icon

Each zone in the NBR-620 Chassis Device View, its related menu, and its double-click zones is described below.

**Figure 2-1. Chassis Device View**




**Module Type**
The type of module being displayed. Table 2-1 outlines the menu selections available per module, excluding generic menu options such as Navigate, Utilities, Notes and Alarms.

**Table 2-1. Module Menu Selections**

| Menu Selection | Description |
|---|---|
| Model Information | Opens the NBR-620 Model Information View. |
| Configuration | Opens the NBR-620 Configuration View. |
| Application View | Opens the Application View. |
| Module Notes | Opens the Module Notes View. |

**Bridging**

Click on this button to display the menu selections defined in Table 2-2, which provide access to views displaying information collected by the bridge installed in the NBR-620. Table 2-2 outlines the menu selections available, excluding generic options such as Navigate, Utilities, Notes, and Alarms.

**Table 2-2. Bridging Menu Selections**

| Menu Selection | Description |
|---|---|
| Bridge Performance | Opens the Bridge Performance View. |
| Bridge Detail | Opens the Bridge Detail View. |
| Bridge Model Information | Opens the Bridge Model Information View. |
| Ethernet Special Database | Opens the Ethernet Special Database View. |
| Spanning Tree Information | Opens the Spanning Tree Information View. |
| Static Database Table | Opens the Static Database Table View. |
| Transparent Bridge Info | Opens the Transparent Bridge Information View. |

**FDDI**

Click on this button to display the menu selections defined in Table 2-3, which provide access to views displaying information collected by the FDDI BRIM installed in the NBR-620. Table 2-3 outlines the menu selections available, excluding generic options such as Navigate, Utilities, Notes and Alarms.

**Table 2-3. FDDI Menu Selections**

| Menu Selection | Description |
|---|---|
| FDDI Notes | Opens the FddiSMT Notes View. |
| FDDI Events | Opens the FddiSMT Events View. |
| FDDI Alarms | Opens the FddiSMT Alarms View. |
| FDDI Performance | Opens the FddiSMT Performance View. |
| FDDI Configuration | Opens the FddiSMT Configuration View. |
| FDDI Station List | Opens the FddiSMT Station List View. |
| FDDI Model Information | Opens the FddiSMT Model Information View. |
| Hub Detail | Opens the FddiSMT Detail View. |

FDDI also has two ring-in/ring-out ports. These FDDI ports provide access to views from the menu selections defined in Table 2-4, excluding generic options such as Navigate, Utilities, Notes, and Alarms.

**Table 2-4. FDDI Port Menu Selections**

| Menu Selection | Description |
|---|---|
| Port Notes | Opens the Ports Notes View. |
| Enable/Disable Port | Opens the Enable/Disable Port View. |
| Port Configuration View | Opens the Port Configuration View. |

### FDDI Module Port Status

The status and color of the FDDI port displays as explained in Table 2-5.

**Table 2-5. FDDI Port Status and Related Colors**

| FDDI Port Status | Status Color |
|---|---|
| ACT (active) | Green |
| DIS (disabled) | Blue |
| CON (connecting) | Yellow |
| SBY (standby) | Red |

### Bridge Channel Ports

The NBR-620 has six ports: four bridge channel RJ45 ports and two BRIM (Bridging Routing Interface Modules) ports. The NBR-420 has one BRIM interface and two EPIMs and the NBR-220 has two EPIMs. The port icon provides 'at-a-glance' information about the port. Figure 2-2 illustrates a detail of the Port Icon-Device Chassis View. Table 2-6 provides a description of the Bridge Port Status colors.

**Figure 2-2. Port Icon - Device Chassis View**

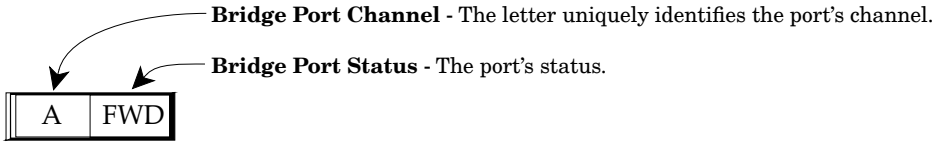


**Table 2-6. Bridge Channel Port Icon Status Colors**

| Status | Color | Description |
|---|---|---|
| OFF | Blue | The port is disabled. |
| BLK | Yellow | The port is in a blocking state. |
| BRKN | Red | The port is in a broken state. |
| FWD | Green | The port is forwarding network traffic. |
| LSTN | Yellow | The port is in a listening state. |
| LRN | Yellow | The port is in a learning state. |

These channel ports provide access to views from the menu selections defined in Table 2-7, excluding generic options such as Navigate, Utilities, Notes and Alarms.

**Table 2-7. Port Menu Selections**

| Menu Selection | Description |
|---|---|
| Channel Notes | Opens the Channel Notes View. |
| Channel Performance | Opens the Channel Performance View. |
| Enable/Disable Bridge Channel | Enables or disables the selected channel. |

# Interface Device View

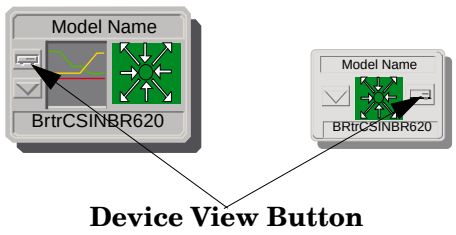
The NBR-620's Interface Device View provides a representation of port icons each of which provide status, activity and information relative to the port. Figure 2-3 provides an example of an Interface Device View.

Also, each representation of a port includes a gauge, which dynamically changes to display changes in traffic over that port as it occurs.

## Accessing the Interface Device View

The Interface Device View is accessed using one of the following methods:

- Double-click on the Device View button of the NBR-620 device icon. This will open the Device View that was opened last (i.e., Chassis, Interface or Physical).




**Device View Button**

- Highlight the NBR-620 device icon and select **Device -> Interface** from the Icon Subviews menu.

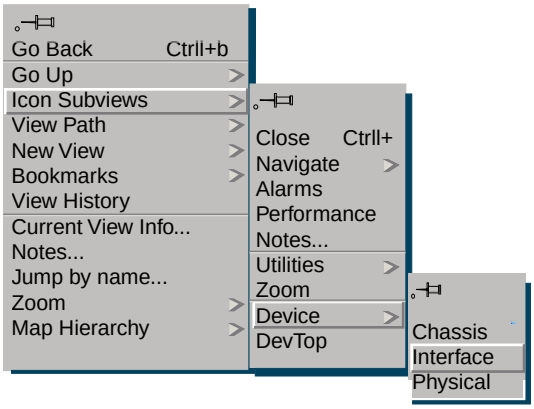
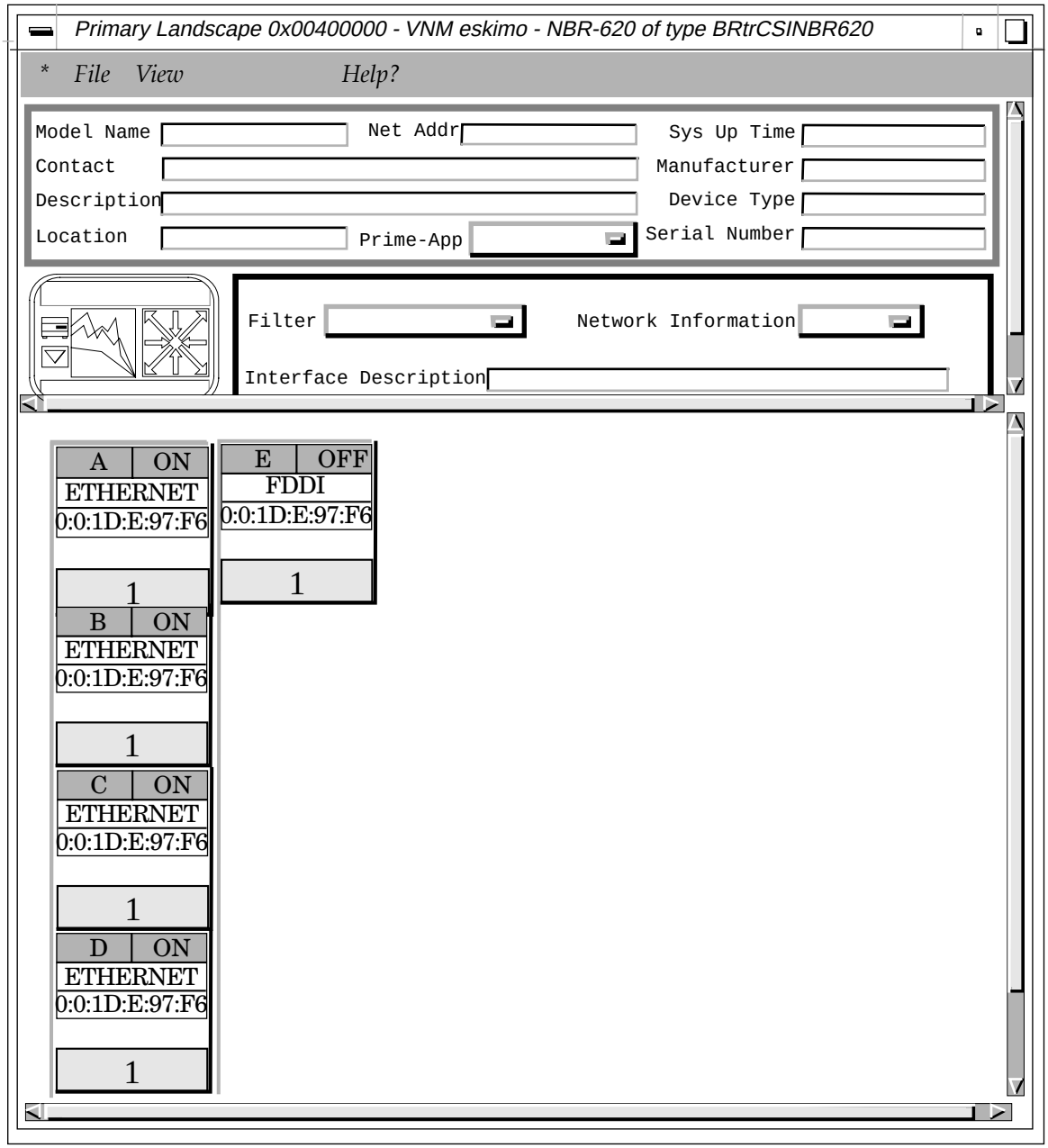

Go Back Ctrll+b
Go Up
Icon Subviews
View Path
New View
Bookmarks
View History
Current View Info...
Notes...
Jump by name...
Zoom
Map Hierarchy
Close Ctrll+
Navigate
Alarms
Performance
Notes...
Utilities
Zoom
Device
DevTop
Chassis
Interface
Physical

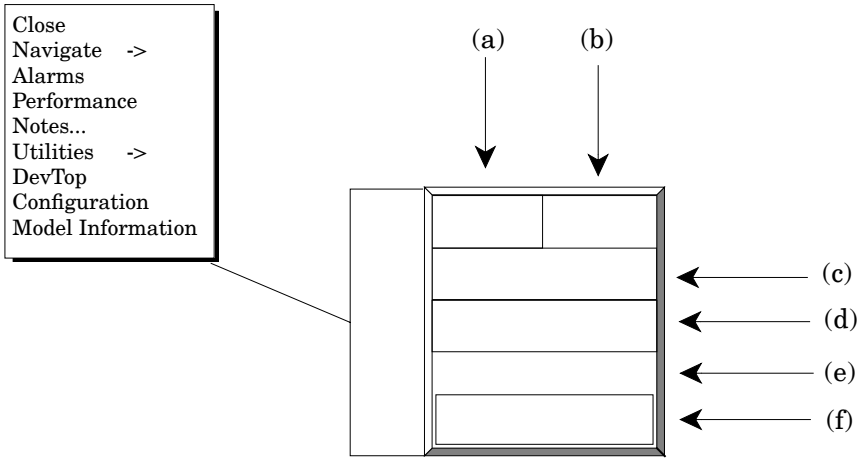
**Figure 2-3. NBR-620 Interface Device View**



# NBR-620 Interface Icon

This section describes the NBR-620 Interface Icon, the icon's double-click zones, and associated views. Figure 2-4 provides an example of the NBR-620 Interface Icon.

**Figure 2-4. NBR-620 Interface Icon**




a. Device Topology View/Interface Number Label
b. Port Configuration View/Administrative Status Label
c. Port Type Label
d. MAC Address Label/Interface Model Information View
e. Network Information Panel/Network Address Label
f. Interface Performance View/Logical Gauge Label

## Device Topology View/Interface Number Label

Double-clicking on this label of the Interface Icon accesses the NBR-620 Device Topology (DevTop) View. The label also displays the number of this interface.

## Port Configuration View/Administrative Status Label

This label provides access to configuration views specific to the port. Double-clicking on this label on the ETHERNET icon opens the Port Configuration View. Double-clicking on this label on the FDDI icon opens the BRIM Interface Configuration View. You can also access these views by highlighting the ETHERNET/FDDI icon and selecting **Configuration** from the Icon Subviews menu. Each view provides the following information:

**Interface Index**
Indicates the value identifying the port.

**Interface Type**
Indicates the type of interface for the port.

**Operation Status**
Indicates the current operating condition of the port for which the entry exists. Possible entries are: On, Off, and Test.

**Admin. Status**
Indicates the current administrative state of the port for which the entry exists. Possible entries: On, Off, and Test.

**IF Description**
Displays a textural description of the interface.

## Port Type Label

The Port Type Label displays the type of NBR-620 interface. Possible interface types are shown in Table 2-8.

**Table 2-8. Port Interface Types**

| Interface Type | Description |
|---|---|
| Other | None of the following |
| Reg1822 | Regular 1822 |
| HDH1822 | HDLC Distant Host protocol |
| DDNX25 | Defense Data Network X.25 |
| rfc877X25 | RFC877 X.25 |
| Ethernet | Ethernet CSMA/CD |
| iso88023 | ISO CSMA/CD |
| iso88024 | ISO token bus |
| iso88025 | ISO token ring |
| iso88026 | ISO man |

**Table 2-8. Port Interface Types (Continued)**

| Interface Type | Description |
|---|---|
| starLan | StarLAN IEEE 802.3 |
| Prot10MB | ProNET 10 Mbps |
| Prot80MB | ProNET 80 Mbps |
| HyChan | Hyperchannel |
| FDDI | Fiber Distributed Data Interface |
| LAPB | X.25 Line Access Procedure, Balanced |
| SDLC | IBM Synchronous Data Link Control protocol |
| T1 | T1 link (USA and Japan) |
| CEPT | T1 link (Europe) |
| BasicISDN | Basic Integrated Services Digital Network |
| PrimISDN | Proprietary Integrated Services Digital Network |
| PPSerial | Proprietary Point to Point Serial |
| PPP | Point to Point Protocol |
| SFTWARLPBK | Software Loopback |
| CLNPoverIP | Connectionless Network Protocol over IP |
| Enet3MB | Ethernet 3 Mbps |
| XNSoverIP | Xerox Network Service Protocol over IP |
| SLIP | Generic Serial Line IP |
| ULTRA | ULTRA Technologies |
| T-3 | T3 link |
| SMDS | Switched Multimegabit Data Service |
| FrameRelay | T1 Frame relay |

## MAC Address Label/Interface Model Information View

The MAC Address Label displays the physical address of the NBR-620 interface. Double-clicking on this label accesses the CSI Interface Port Model Information View.

## Network Information Panel/Network Address Label

Double-clicking on this label accesses the Network Information Panel, which provides Name, Network Address and subnet mask information for the interface. Any of the network information entries from this panel can be displayed on the Network Address Label. Refer to Interface Options Panel section of this chapter for more information.

## Interface Performance View/Logical Gauge Label

Double-clicking on this label of the Interface Icon accesses the Performance View for the interface. You can also access this view by highlighting the ETHERNET/FDDI icon and selecting **Performance** from the Icon Subviews menu. This area is also a Logical Gauge, which is described in the next section. The Performance View summarizes network traffic flow in packets for this interface, providing the following information:

**Multi-Attribute Line Graph**
The Multi-Attribute Line Graph provides a general indication of network activity. The attributes are pre-selected and use colors to represent different statistics.

For more information on the Multi-Attribute Line Graph, refer to the *SPECTRUM Views* reference and the *MIB II Applications, Bridging Applications, and Miscellaneous Applications* references. Table 2-9 lists the color and statistical definitions for each attribute.

**Table 2-9. Color and Statistical Definitions by Application**

| Statistic | Color | Description |
|---|---|---|
| % Transmitted | white | The percentage of the total number of packets that have been transmitted, device-wide, during uptime. |
| % Discarded | orange | The percentage of the total number of packets that have been discarded, device-wide, during uptime. |
| % Error | red | The percentage of the total number of error packets that have occurred, device-wide, during uptime. |
| % Host Bound | yellow | The percentage of the total number of packets that have been delivered to the local host from the port during uptime. |
| In Packet Rate | light blue | The total number of packets that have been received, device-wide, during uptime. |
| Out Packet Rate | turquoise | The total number of packets that have been transmitted, device-wide, during uptime. |

| | | |
|---|---|---|
| Total Packet Rate | royal blue | The total number of packets that have been transmitted and received, device-wide, during uptime. |
| In Load | green | The amount of bandwidth used per packets received during the port's uptime. |
| Out Load | mustard green | The amount of bandwidth used per packets transmitted during the port's uptime. |
| Total Load | light green | The amount of bandwidth used per packets received and transmitted during the port's uptime. |

**Multi-Attribute Line Graph Buttons**
Buttons allow you to modify the statistical presentation of the Multi-Attribute Line Graph. The following section describes each button's functions.

**Lin/Log**

This button toggles between a linear or logarithmic scale presentation of the graph.

**Scroll to Date-Time**

This button allows you to set the viewing area of the graph to begin at a specified date and time.

**Change Time Scale**

This button allows you to specify the Y axis time scale for the graph.

# Interface Options Panel

The Interface Option Panel area of the Device View allows you to modify the presentation of the Logical Interface Icon. This panel is divided into the three sections described below.

## Filter

The Filter area of the Interface Options Panel is only implemented if the SPECTRUM Routing Services Management Module is loaded.

### Network Information

The Network Information area of the Interface Options Panel allows you to select what interface information is displayed in the Network Information Label zone. Possible selections are ADDRESS, NAME, or MASK.

### Interface Description

Selecting an Interface Icon displays the type of interface in the Interface Description area of the Interface Options Panel.

## Gauge Control Panel

The Gauge Control Panel allows you to change the type of statistical information presented in the Logical Gauge area of the Logical Interface Icon. To access the Gauge Control Panel, either double-click on the Interface Options Panel or single-click on the panel to highlight it and then select **Gauge Control Panel** from the Icon Subviews menu. The Gauge Control Panel is divided into the sections described below.

### Selected Attribute

This area of the Gauge Control Panel allows you to select the statistical attribute displayed on the Logical Interface Icon's Gauge. The label changes color to reflect the attribute selected. Table 2-10 and Table 2-11 provide a list of the attributes and their corresponding colors.

### Gauge Mode

This area of the Gauge Control Panel allows you to select the mode presented by the Logical Gauge. Possible selections are Totals, Rates, or Percentages. The Percentages selection represents the percentage of the interface compared to the rest of the interfaces. Table 2-10 shows the displayed attributes and their color definitions if the Totals mode is selected. Table 2-11 shows the displayed attributes and their color definitions if the Rates mode is selected.

**Table 2-10. Gauge Mode Attribute Totals and Color Defintions**

| Selected Attribute | Color |
|---|---|
| Errors | Orange |
| In Packets | Lt. Blue |
| Out Packets | Lt. Blue |
| In Octets | Green |
| Out Octets | Green |
| Discards | Tan |
| Forwarded | Lt. Purple |
| Host Bound | Yellow |
| Transmitted | White |
| Filtered | Gray |

**Table 2-11. Gauge Mode Rate Attributes and Color Definitions**

| Selected Attribute | Color |
|---|---|
| Load | Green |
| Load In | Green |
| Load Out | Green |
| Packet Rate | Lt. Blue |
| In Packet Rate | Lt. Blue |
| Out Packet Rate | Lt. Blue |
| Discard | Tan |
| Filtered | Gray |
| Forwarded | Lt. Violet |
| Host Bound | Yellow |
| Error | Orange |
| Transmitted | White |

### Gauge Type

This option allows you to select either a numeric or linear representation of the Logical Gauge. The following section describes the Logical Gauge buttons.

**Apply**

Apply the current selections to the Logical Gauge. The settings are not saved.

**Keep Settings**

Save the current gauge settings while running SpectroGRAPH.

**Reset**

Reset back to the last Keep Settings selections.

**Close**

Close the Gauge Control Panel.

**Default**

Reset back to the default attribute of Load.

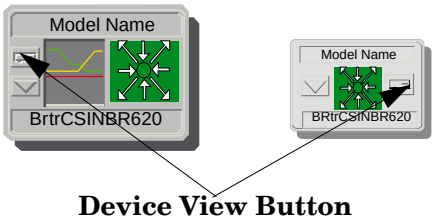
# Physical Device View

This section describes the module information available from the NBR-620 Physical Device View, which displays a physical representation of the NBR-620 module. Figure 2-5 provides an example of an NBR-620 Physical Device View.

## Accessing the Physical Device View

The Physical Device View is accessed using one of the following methods:

- Double-click on the Devie View button of the NBR-620 device icon. This will open the Device View that was opened last (i.e., Chassis, Interface or Physical).




**Device View Button**

- Highlight the NBR-620 device icon and select **Device -> Physical** from the Icon Subviews menu.

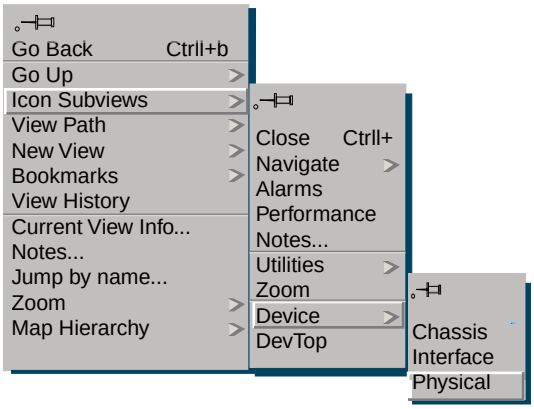
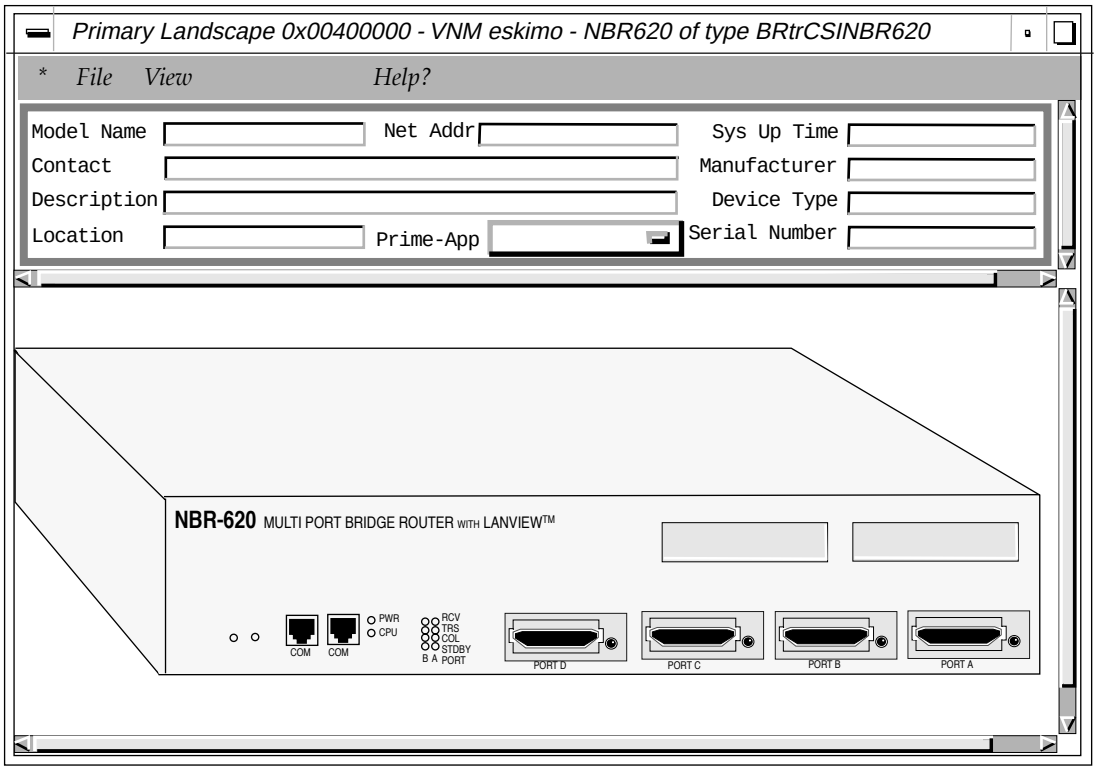


**Figure 2-5. NBR-620 Physical Device View**




The menu available from the NBR-620 module icon in the NBR-620 Physical Device View is described in Table 2-12, excluding the generic menu options such as Navigate, Utilities, Notes and Alarms.

**Table 2-12. Physical Device View Module Icon Menu Selections**

| Menu Selection | Description |
|---|---|
| Model Information | Opens the NBR-620 Model Information View. |
| Configuration | Opens the NBR-620 Configuration View. |
| Application View | Opens the Application View. |
| Module Notes | Opens the Module Notes View. |

# Telnet

A Telnet connection is the establishment of a telnet session with a remote device through which you can enter commands just as if you were connected locally.

You can telnet to the device by highlighting the NBR-620 icon and selecting **Utilities -> Telnet** from the Icon Subviews menu or by clicking on an NBR-620 icon with the right mouse button and selecting **Utilities -> Telnet** from the Subviews menu.

To activate the telnet session enter the password at the **`Password:`** prompt. The default password is any one of the device community strings.

Once the password is entered, the **`Console ->`** prompt or the **`MIBNav ->`** prompt displays. The MIB (Management Information Base) Navigator allows you access to a command set from which you can configure and manage objects in the device MIBs. For assistance in using the MIB Navigator, type **`help`** at the prompt. Refer to the Cabletron document *NBR-620 User's Guide* for MIB Navigator information.

# Chapter 3

# Configuration Views

## What is in This Chapter

This chapter provides general descriptions of the configuration views that are available for the NBR-620. These views allow you to access device-specific configuration information. The NBR-620 management module supports the following configuration views:

- Device
- FDDI Port
- SMT Device

Also described in this chapter is Router Redundancy, which provides the capacity to reconfigure router addresses through the Preferred Addresses Window.

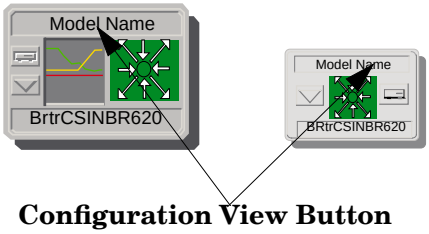
# NBR-620 Device Configuration View

The NBR-620 Device Configuration View provides information on the configuration and operating status of the NBR-620. It also allows you to change the network connections.

## Accessing the Device Configuration View

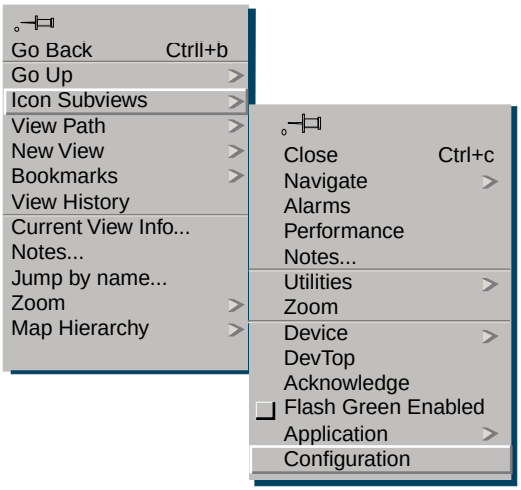
Access the Device Configuration view using one of the following methods:

- Double-click on the Configuration View Label of the NBR-620 device icon.




**Configuration View Button**

- Highlight the NBR-620 device icon and select **Configuration** from the Icon Subviews menu.



The Device Configuration View provides the following information:

**Contact Status**
This field indicates if a connection with the device has been established.

**Firmware Revision**
The firmware revision for the device being modeled.

**Hardware Revision**
The hardware revision for the device being modeled.

**Component Table**

Click on this button to access the Community Names tool. The Community Names tool lets you quickly view and change community names for any MIB component. It also allows you to enable or disable certain MIB components to free up system resources. (For more information on this tool, refer to the *SPECTRUM Portable Management Application (SPMA) Tools Guide*.)

**Download Application**

Click on this button to access the TFTP Download Application tool. The TFTP Download tool lets you set up download parameters and control the download. In addition, the TFTP Download tool can direct a device to use firmware located on a network server instead of booting from code located on the device. (For more information on this tool, refer to the *SPECTRUM Portable Management Application (SPMA) Tools Guide*.)

**Trap Table**

Click on this button to access the Trap Table window. This view allows you enable and disable traps and specify the IP address of the management workstation that receives and processes the trap messages. (For more information on this tool, refer to the *SPECTRUM Portable Management Application (SPMA) Tools Guide*.)

## Interface Configuration Table

The Interface Configuration Table provides the following configuration information for each of the NBR-620's ports:

**Number of Interfaces**
Displays the number of interfaces available from this device.

**Index**
Displays the number of the interface.

**Type**
The type of hardware interface for the port. Possible interface types and a brief description of each type are shown in Table 3-1.

**Phy Address**
The Ethernet (MAC) address of the port.

**Max Frame Size**
The maximum frame size for the NBR-620 interfaces.

**Oper Status**
The current operational state of this port (Up, Down, or Testing).

**Table 3-1. NBR-620 Interface Types**

| Interface Type | Description |
|---|---|
| other | None of the following |
| regular1822 | Regular 1822 |
| hdh1822 | HDLC Distant Host protocol |
| ddn-X25 | Defense Data Network X.25 |
| rfc877-x25 | RFC877 X.25 |
| ethernet-csmacd | Ethernet CSMA/CD |
| iso88023-csmacd | ISO CSMA/CD |
| iso88024-tokenRing | ISO token bus |
| iso88025-tokenRing | ISO token ring |
| iso88026-man | ISO man |
| starLan | StarLAN IEEE 802.3 |
| proteon-10Mbit | ProNET 10 Mbps |
| proteon-80Mbit | ProNET 80 Mbps |
| fddi | Fiber Distributed Data Interface |
| lapb | X.25 Line Access Procedure, Balanced |
| sdlc | IBM Synchronous Data Link Control protocol |
| ds1 | T1 link (USA and Japan) |
| e1 | T1 link (Europe) |
| basicISDN | Basic Integrated Services Digital Network |
| primaryISDN | Proprietary Integrated Services Digital Network |
| propPointToPointSerial | Proprietary Point to Point Serial |
| ppp | Point to Point protocol |
| softwareLoopback | Software Loopback |
| eon | Connectionless Network Protocol over IP |
| ethernet-3Mbit | Ethernet 3 Mbps |

**Table 3-1. NBR-620 Interface Types (Continued)**

| | |
|---|---|
| nsip | Xerox Network Service Protocol over IP |
| slip | Generic Serial Line IP |
| ultra | ULTRA Technologies |
| sip | Switched Multimegabit Data Service |
| frame-relay | T1 Frame relay |

# FDDI Port Configuration View

The FDDI Port Configuration View provides information concerning the configuration of the FDDI port. To access the FDDI Port Configuration View, click on the Logical FDDI Port Icon from the Chassis Device View to highlight it, and select **Port Configuration View** from the Icon Subviews menu.

## Port Configuration View Banner

The Port Configuration View banner displays the following information.

**Model Name**
The FDDI SMT chassis model name.

**Network Address**
The IP address of the FDDI SMT.

**SMT.Port**
The left number represents the FDS SMT number, and the number to the right of the decimal point represents the port index.

## Port Management

The Port Management section of the FDDI Port Configuration View provides the following information:

**Port Action**
This field allows you to enable/disable the port. The state returns to “Other” once the port has been enabled/disabled.

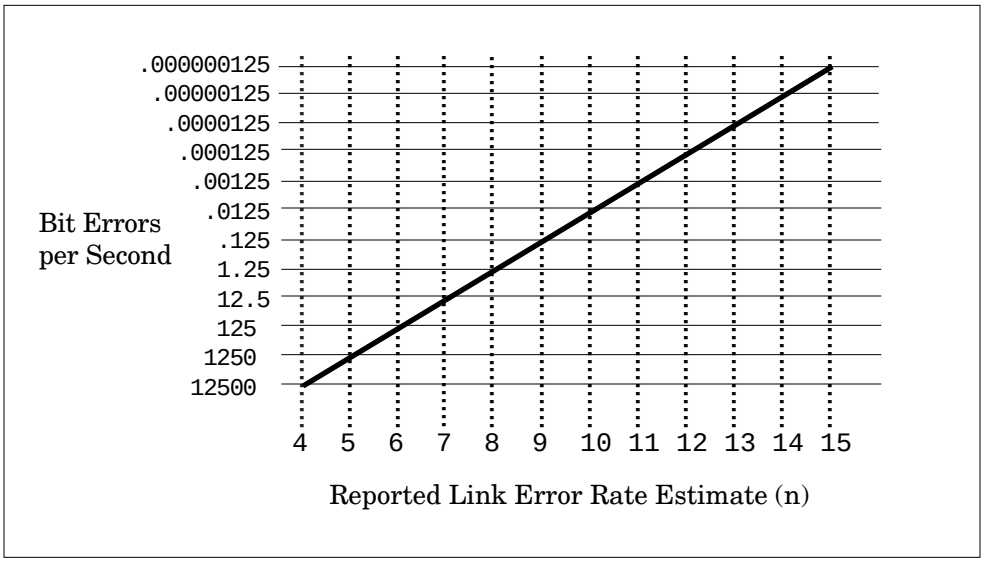
**Port State**
The status of this port. Possible states are: disabled, connecting, standby, and active.

**Port Type**
The type of port. Possible port types are: A_Port, B_Port, Slave, or Master.

**Port Class**
The class of the port. Possible states are: multi-mode, single-mode1, single-mode2, sonet, low-cost fiber, and twisted pair.

**Link Error Rate Estimate**
The link error rate estimate is a cumulative long-term average of the bit error rate, which represents the quality of the physical link. The link error rate estimate is computed when the port is connected and every 10 seconds thereafter. It ranges from $10^{-4}$ to $10^{-15}$ and is reported as a whole integer. For example, if the port's link error rate estimate is computed to be $10^{-5}$, the value reported in this field would be 5, which represents an actual rate of 1,250 bit errors per second. A lower link error rate estimate indicates a higher bit error rate as shown in Figure 3-1.

**Figure 3-1. Link Error Rate Estimate**




**Link Error Monitor Count**
The aggregate link error monitor count. This count is set to zero on station power up and increments each time the port's link error monitor detects an error. An increasing link error monitor count usually indicates a problem with the connectors or the cable between this port and the node.

**Link Error Rate Cutoff**
The link error rate threshold at which a link connection is flagged as faulty and the port disabled by SMT. The default link error rate cutoff threshold is 7,

which represents 12.5 bit errors per second (refer to Figure 3-1). This value can be changed.

**Link Error Rate Alarm**
The link error rate threshold which, if exceeded generates an alarm for the port. The default link error rate alarm threshold is 8, which represents 1.25 bit errors per second (refer to Figure 3-1). This value can be changed.

**Link Error Monitor Reject Count**
The link error monitor count of the times the link has been rejected.

# SMT Device Configuration View

The SMT Device Configuration View provides information on the configuration and operating status of the concentrator. To access this view, click on the FddiSMT Application Icon in the Application View to highlight it, and select **Configuration** from the Icon Subviews menu.

## Station Configuration View

This section of the SMT Device Configuration View provides configuration information on the FDDI station. This configuration information is as follows:

**Ring State**
The current state of the FDDI Ring. Table 3-2 provides the possible states.

**Table 3-2. FDDI Ring States**

| Ring States | Description |
|---|---|
| Isolated | The concentrator is not attached to the ring. |
| Non-Op | The concentrator is attempting to enter the ring. |
| Ring-Op | The ring is operational. |
| Detect | The claim/beacon process of the FDDI ring protocol has exceeded 1 second. This indicates a potential problem. |
| Non-Op-Dup | The ring failed to complete the claim/beacon process because a duplicate FDDI address has been detected. |
| Ring-Op-Dup | The ring is operational but a duplicate FDDI address has been detected. |

**Table 3-2. FDDI Ring States**

| | |
|---|---|
| Directed | The claim/beacon process did not complete within 9 seconds. The concentrator is now sending directed beacons to indicate a problem. |
| Trace | A problem has been detected with the station or its upstream neighbor. A trace is being sent to notify the upstream neighbor of the problem. The concentrator and all stations between the concentrator and its upstream neighbor can perform self-tests. |

**MAC Configuration**
The actual configuration of the station. Table 3-3 shows the possible configurations.

**Table 3-3. SMT MAC Configurations**

| Ring States | Description |
|---|---|
| Isolated | The path is not inserted into any path. |
| Local_A | The A port is inserted into a local path and the B port is not. |
| Local_B | The B port is inserted into a local path and the A port is not. |
| Local_AB | Both A and B are inserted into a local path. |
| Local_S | The S port is inserted into a local path. |
| Wrap_A | The secondary path is wrapped to the A port. |
| Wrap_B | The secondary path is wrapped to the B port. |
| Wrap_AB | The primary path is wrapped to the B port and the secondary path is wrapped to the A port. |
| Wrap_S | The primary port is wrapped to the S port. |
| C_Wrap_A | The primary and secondary paths are joined internally in the station and wrapped to the A port. Regarding the token flow, all of the resources on the secondary path precede those of the primary path. |
| C_Wrap_B | The primary and secondary paths are joined internally in the station and wrapped to the B port. Regarding the token flow, all of the resources on the secondary path precede those of the primary path. |

**Table 3-3. SMT MAC Configurations**

| | |
|---|---|
| C_Wrap_S | The primary and secondary paths are joined internally in the station and wrapped to the S port. Regarding the token flow, all of the resources on the secondary path precede those of the primary path. |
| Thru | The primary path enters the A port and emerges from the B port. The secondary path enters the B port and emerges from the A port. |

**MAC Path**
The ring that this station resides on: Primary, Secondary, or Local.

**MAC Address**
The MAC (physical) address of this station.

**MAC Count**
The number of MACs supported by this station.

**Non Master Ports**
The number of non-master ports on this station.

**Master Ports**
The number of master ports on this station.

# SMT Information

This section of the SMT Device Configuration View provides configuration information on the FDDI SMT. This configuration information is as follows:

**SMT Version**
The version of SMT (Station Management) running on this concentrator.

**OBS Present**
Indicates whether an OBS (Optical Bypass Switch) is connected to this concentrator.

**T-Notify (sec)**
The timer value, in seconds, used in Neighbor Notification Protocol. The allowed range is 2-30 seconds.

**T-Req (milli sec)**
The TTRT (Target Token Rotation Time) bid, in milliseconds, made by this concentrator.

**T-Neg (milli sec)**
The winning TTRT bid, in milliseconds, on the ring.

**TVX (milli sec)**
The valid transmission time, in milliseconds.

# Router Redundancy

Router Redundancy enables SPECTRUM to contact the device through an alternate port in the event of a primary port failure.

If SPECTRUM is unable to contact the router through the IP address initially assigned to it (Primary Address), the router's icon turns yellow, and SPECTRUM attempts to reach the router via the ports on the device's Preferred Address list, until contact is made. SPECTRUM then uses that IP address to obtain network management information from the router until the Primary Address becomes available again. When contact is re-established through the Primary Address, the icon turns green.

If SPECTRUM is unable to make contact via any of the Preferred Addresses, the router's icon turns red, denoting that contact has been lost with the actual physical device.

## Turning Router Redundancy Off and On

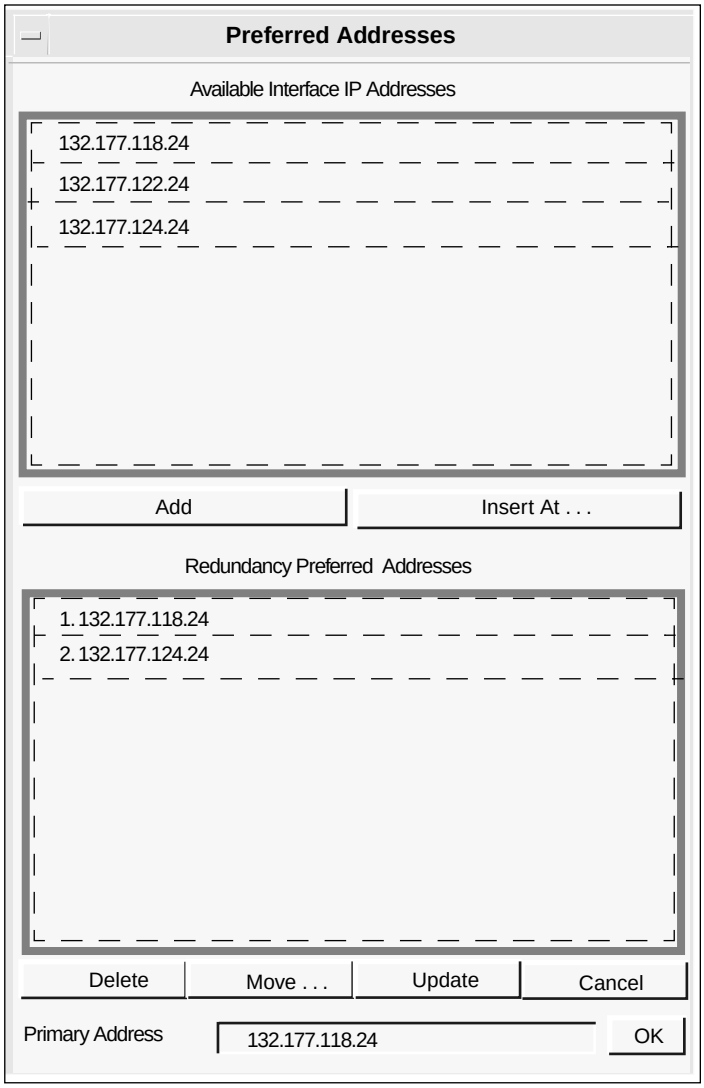
The default status for Router Redundancy is "True" (on). Turn it off and on as follows:

1. Select **Model Information** from the Icon Subviews menu.
2. Click **Router Redundancy Information**. Select **False** from the **Router Redundancy** button to turn off router redundancy and select **True** to turn it on.

## Selecting Addresses for Router Redundancy

1. Ensure that Router Redundancy is on ("True").
2. Select **Model Information** from the Icon Subviews menu.
3. Click **Router Redundancy Information**. Click the **Preferred Addresses** button. The Preferred Addresses window (Figure 3-2) appears.

**Figure 3-2. Preferred Address Window**




NOTES

*When you first create the router model, all its port addresses are listed in both the Available Interface IP Addresses panel and the Redundancy Preferred Addresses panel. Depending on the topology and configuration of your network, you may wish to delete some of the preferred addresses.*

*The numbers to the left of the preferred addresses indicate the order in which SPECTRUM will attempt to contact the ports in the event of a primary address failure.*

4. Make changes as needed:

**To change the Primary Address:**
Double-click the Primary Address field, type the new primary address, and click **OK**.

**To delete a Preferred Address:**
Click the preferred address you want to delete, then click **Delete**.

**To add a Preferred Address:**
*End of list*: Click the available address you want to add, then click **Add**.
*Specific position in list*: Click the available address you want to add, click **Insert At...**, type the position number, and click **OK**.

**To change the position of a Preferred Address:**
Click the preferred address you want to reposition, click **Move**, then fill in the position information and click **OK**.

5. Click **Update** to save the changes.
6. Click **Reconfigure Router Addresses** in the Router Redundancy Information View.

# Chapter 4

# Event and Alarm Messages

## What is in this Chapter

This chapter describes the types of events and alarms generated by the NBR-620 and any probable cause messages corresponding to these alarms.

## NBR-620 Events and Alarms

Events and alarms originate as generic SNMP traps sent from the physical device. These traps, or unsolicited messages, are translated as SPECTRUM events and displayed in the Event Log. For more information on traps generated by a specific device, refer to RFC 1213, available through the Internet system. Also refer to the MIB documentation for the specific device.

For each event/alarm listed in this chapter, the following information is provided:

- The event code
- The event/alarm message
- Any probable cause message for the mapped alarm
- Any recommended actions

Variable data inserted in a message is indicated by the following brackets: {}

The following table describes the event messages appearing in the Event Log, and any corresponding probable cause messages that may be displayed in the Enterprise Alarm Manager View for the NBR-620.

**Table 4-1. NBR-620 Events and Alarms**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event00010203<br><br>{d "%w-%d %m-, %Y - %T"} - The model created is not the same type as the device. Model type = {t}, Name = {m}, User = {u}. (event [{e}]) | CsPCause/Prob00010203<br><br>The model created is not the same type as the device. |
| CsEvFormat/Event00010301<br><br>{d "%w- %d %m-, %Y - %T"} - Device {m} of type {t} has been contacted. (event [{e}]) | Not Applicable |
| CsEvFormat/Event00010306<br><br>{d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has been cold started, (event [{e}]) | Not Applicable |
| CsEvFormat/Event00010307<br><br>{d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m} has been warm started, (event [{e}]) | Not Applicable |
| CsEvFormat/Event00010308<br><br>{d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected a communication Link Down. (event [{e}]) | CsPCause/Prob00010308<br><br>Communication link is down. |
| CsEvFormat/Event00010309<br><br>{d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected a communication Link Up. (event [{e}]) | Not Applicable |
| CsEvFormat/Event0001030a<br><br>{d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected an Authentication Failure. (event [{e}]) | CsPCause/Prob0001030a<br><br>Authorization failure. Other user is trying to connect to device with an invalid community string. |
| CsEvFormat/Event0001030b<br><br>{d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected an EGP Neighbor Loss. EGP Neighbor IP address is {0 1}.(event [{e}]) | CsPCause/Prob0001030b<br><br>Lost contact with EGP neighbor. |

**Table 4-1. NBR-620 Events and Alarms (Continued)**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event00010401<br><br>{d "%w- %d %m-, %Y - %T"} - Device {m} of type {t} is created with an IP address already used by another model, (event [{e}]) | CsPCause/Prob00010401<br><br>DUPLICATE IP ADDRESS<br>The model has the same IP address as that of some other model. |
| CsEvFormat/Event00010402<br><br>{d "%w- %d %m-, %Y - %T"} - Device {m} of type {t} is created with a physical (Mac) address already used by another model. (event [{e}]) | CsPCause/Prob00010402<br><br>DUPLICATE PHYSICAL ADDRESS<br>The model has the same Physical address (Mac address) as that of some other model. |
| CsEvFormat/Event00010702<br><br>{d "%w- %d %m-, %Y - %T"} - Alarm number {I 0x700} cleared for device {m} of type {t}. (event [{e}]) | Not Applicable |
| CsEvFormat/Event000d0001<br><br>{d "%w- %d %m-, %Y - %T"} - Bridge {m} of type (t) has reported a root change (event [{e}])). | CsPCause/Prob000d0001<br><br>This bridge has become the new root of the Spanning Tree. |
| CsEvFormat/Event000d0002<br><br>{d "%w- %d %m-, %Y - %T"} - Bridge {m} of type (t) has reported a network topology change (event [{e}])). | CsPCause/Prob000d0002<br><br>A port has transitioned from the Learning state to the Forwarding state, or from the Forwarding state to the Blocking state. |
| CsEvFormat/Event000d0101<br><br>{d "%w- %d %m-, %Y - %T"} - Port {I 3} on module in slot {I 1} of {m} ({t}), has segmented. | CsPCause/Prob000d0101<br><br>The port has made 32 consecutive attempts to transmit which resulted in a collision each time or the port collision detector was turned on for longer than 2.4 milliseconds. Each of these collision occurrences are caused by a cabling problem of extremely high rates of traffic on the segment the port is attached to. |
| CsEvFormat/Event000d0102<br><br>{d "%w- %d %m-, %Y - %T"} - Port {I 3} on module in slot {I 1} of {m} ({t}), has unsegmented. | CsPCause/Prob000d0102<br><br>The port has transmitted or received a valid packet. This can occur when a cabling or termination fault has been corrected. Unsegmenting can also occur on a port that previously was not in use. |

**Table 4-1. NBR-620 Events and Alarms (Continued)**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event000d0103<br><br>{d "%w- %d %m-, %Y - %T"} - Network configuration change reported by {m} ({t}). Device linked to port {I 3} on module in slot {I 1}. | CsPCause/Prob000d0103<br><br>A device supporting link integrity, fiber optic, or twisted pair has made a valid connection (link) to this port. |
| CsEvFormat/Event000d0104<br><br>{d "%w- %d %m-, %Y - %T"} - Network configuration change reported by {m} ({t}). Device previously linked to port {I 3} on module in slot {I 1} has ceased to transmit link integrity pulse. | CsPCause/Prob000d0104<br><br>A device previously linked to this port has been removed, powered down, or the cable segment has a fault. |
| CsEvFormat/Event000d0105<br><br>{d "%w- %d %m-, %Y - %T"} - New source address {X 5}, is detected on {m} ({t}), port {I 3} of module in slot {I 1}. | CsPCause/Prob000d0105<br><br>A device, previously linked or not, has transmitted a packet that was received on this port. The device is either new or has been powered up but has not transmitted a packet during the aging time period. |
| CsEvFormat/Event000d0106<br><br>{d "%w- %d %m-, %Y - %T"} - Source address {X 5}, has timed out on port {I 3} of the module in slot {I 1} of {m} ({t}). | CsPCause/Prob000d0106<br><br>A device linked or not linked to this port has not transmitted a packet during the aging time period, and has been removed from the source address table of the device. |
| CsEvFormat/Event000d0107<br><br>{d "%w- %d %m-, %Y - %T"} - Device configuration change reported by {m} ({t}). The module in slot {I 1} has been removed. | CsPCause/Prob000d0107<br><br>A module within this hub has been removed or has failed. |
| CsEvFormat/Event000d0108<br><br>{d "%w- %d %m-, %Y - %T"} - Device configuration change reported by {m} ({t}), A module has been inserted into {I 1} of the MMAC. | CsPCause/Prob000d0108<br><br>A module has been inserted into this hub. |

**Table 4-1. NBR-620 Events and Alarms (Continued)**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event000d0109<br><br>{d "%w- %d %m-, %Y - %T"} - Network configuration change reported by {m} ({t}). Port {I 3} in slot {I 1} has failed redundancy polling and has switched to a backup port. | CsPCause/Prob000d0109<br><br>The polled device(s) in the redundant circuit polling list have failed to respond. The device(s) have failed, been powered down, or a cable fault from the active port to the polled device has occurred. Check the retry count as it may need to be adjusted on a busy network segment. Normal collision occurrences may occur causing the poll packet to not reach its destination. |
| CsEvFormat/Event000d010a<br><br>{d "%w- %d %m-, %Y - %T"} - Network configuration change reported by {m} ({t}). Port {I 3} in slot {I 1} has now become active as the result of a redundancy polling failure. | CsPCause/Prob000d010a<br><br>The polled device has been communicated with via a backup port and the port is now active. The other ports in this redundant circuit are now designated as backup and are turned off to prevent data loops on the network. |
| CsEvFormat/Event000d010b<br><br>{d "%w- %d %m-, %Y - %T"} - Redundancy diagnostics of {m} ({t}), indicate that the redundant link for module {I 1}, port {I 3} has failed. | CsPCause/Prob000d010b<br><br>The cable segment connected to the port has a cable fault and should be checked for continuity as soon as possible in the event the other ports in this redundant circuit fail and this port is needed. |
| CsEvFormat/Event000d010f<br><br>{d "%w- %d %m-, %Y - %T"} - User defined traffic threshold - {I 1} packets within {I 3} seconds, exceeded on module {I 5} of {m} ({t}). | CsPCause/Prob000d010f<br><br>The packet rate on this module has exceeded user defined limits. The device(s) attached to this module may have an application which requires a large amount of network bandwidth. If the application required a large amount of network bandwidth, then a bridge or router could be used to logically separate various network segments. Use port level thresholds to further troubleshoot to a device level. |
| CsEvFormat/Event000d0110<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Error threshold exceeded. An error threshold of {I 1}% good packets in {I 5} seconds, exceeded on module in slot {I 7}. | CsPCause/Prob000d0110<br><br>This threshold will indicate that a malfunctioning device is present on this module or that a cable fault exists. A port level threshold should be set to further troubleshoot to the offending node. |

**Table 4-1. NBR-620 Events and Alarms (Continued)**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event000d0111<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Collision threshold exceeded. Collisions exceeded {I 1}% of good packets in {I 3} seconds on the module in slot {I 5} of {m} ({t}). | CsPCause/Prob000d0111<br><br>Collisions are caused by many nodes contending for the network of cabling faults. Use port level thresholds to further troubleshoot to a device level. |
| CsEvFormat/Event000d0112<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Traffic threshold, packets per {I 3} seconds, exceeded on port {I 7} on module in slot {I 5} of {m} ({t}). | CsPCause/Prob000d0112<br><br>The device(s) attached to this port may have an application which requires a large amount of network bandwidth. If the application requires a large amount of network bandwidth, then a bridge or router could be used to logically separate various network segments. |
| CsEvFormat/Event000d0113<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Error threshold exceeded. An error threshold of {I 1}% good packets in {I 5} seconds, exceeded on port {I 9} on module in slot {I 7} of {m} ({t}). | CsPCause/Prob000d0113<br><br>The device(s) attached to this port could have a hardware failure where it transmits invalid packets or the cable segment attached to this port may have a problem. Check cable for loose connection or continuity problems. |
| CsEvFormat/Event000d0114<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Collision threshold exceeded. Collisions exceeded {I 1}% of good packets in {I 3} seconds on port {I 7} on module in slot {I 5} of {m} ({t}). | CsPCause/Prob000d0114<br><br>The device(s) attached to this port may have an adapter card problem which causes them to transmit without regarding network availability or a cable problem may exist. Check adapter card and cable for loose connections, termination problems, or improper pinouts. |

**Table 4-1. NBR-620 Events and Alarms (Continued)**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event000d0115<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Port type changed. Port {I 3} of module in slot {I 1} has changed types of {m} ({t}). | CsPCause/Prob000d0115<br><br>The number of addresses in the source address table has changed. If more than one address is learned on a port for one aging time period, the port is designated as a trunk port. A port connecting two hubs or a coax segment with multiple taps are examples of trunk ports. If a port has one address in the source address table for two aging time, the port is designated as a station port. An example of a station port would be a twisted pair "home run" to a PC. |
| CsEvFormat/Event000d0117<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Port security violation has occurred on port {I 3} of module in slot {I 1} has changed types of {m} ({t}). | CsPCause/Prob000d0117<br><br>This event is only generated when the hub has port locking enabled. When a hub is locked, the source MAC addresses are learned on each port. When a port detects an attached device has changed its address, the device will note that the new address is not in the source address table. This will disable and lock the port which then transmits this trap. This trap would be generated if an adapter were replaced or if an intruder attempts to access the network. |
| CsEvFormat/Event000d0118<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Port violation reset, port {I 3} of module in slot {I 1} of {m} ({t}). | CsPCause/Prob000d0118<br><br>The network administrator has located the offending device that caused the port violation and has re-enabled the port for use by the original network address for that port. |
| CsEvFormat/Event000d0119<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Environment Temperature Warm condition for module in slot {I 1} reported by {m} ({t}). | CsPCause/Prob000d0119<br><br>The module may be defective or a fan has failed in the chassis. Check the alarm log for this device for any fan alarms. |
| CsEvFormat/Event000d011a<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Environment Temperature Hot condition for module in slot {I 1} reported by {m} ({t}). | CsPCause/Prob000d011a<br><br>The module may be defective or a fan has failed in the chassis. This alarm indicates a serious heat condition and should be addressed immediately. |

**Table 4-1. NBR-620 Events and Alarms (Continued)**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event000d011b<br><br>{d "%w- %d %m-, %Y - %T"} - Environment Voltage Low condition has been detected by power supply in slot {I 1} of {m} ({t}). | CsPCause/Prob000d011b<br><br>The internal voltage of the power supply module is low. The voltage condition indicates that either the supply itself is defective or an AC power failure has occurred into the power supply module. |
| CsEvFormat/Event000d011c<br><br>{d "%w- %d %m-, %Y - %T"} - Environment Temperature Normal condition for module in slot {I 1} reported by {m} ({t}). | CsPCause/Prob000d011c<br><br>A chassis or cooling system problem at this device's location has been corrected. |
| CsEvFormat/Event000d011d<br><br>{d "%w- %d %m-, %Y - %T"} - Environment Voltage Normal condition has been detected by power supply in slot {I 1} of {m} ({t}). | CsPCause/Prob000d011d<br><br>The problem with the power supply module or AC power feed has been corrected and the unit is now functioning normally. |
| CsEvFormat/Event000d011e<br><br>{d "%w- %d %m-, %Y - %T"} - A fan in the system's chassis has failed or is operating at an abnormal RPM rate, has been detected by {m} ({t}). | CsPCause/Prob000d011e<br><br>A fan or fans in the fan tray assembly has failed or the fan tray has been removed. The situation is not critical but temperature warm or temperature hot traps may follow. If the temperature traps have appeared in the alarm log, then the failure should be addressed before overheating damages the device. |
| CsEvFormat/Event000d011f<br><br>{d "%w- %d %m-, %Y - %T"} - A fan in the system's chassis has resumed normal operation, has been detected by {m} ({t}). | CsPCause/Prob000d011f<br><br>The problem previously detected with the fan assembly has been corrected and the unit is now functioning normally. |
| CsEvFormat/Event000d0121<br><br>{d "%w- %d %m-, %Y - %T"} - Board Broadcast Threshold Exceeded. | CsPCause/Prob000d0121<br><br>This trap will be generated when the broadcast (packets per time interval) has been exceeded for the given module. |
| CsEvFormat/Event000d0122<br><br>{d "%w- %d %m-, %Y - %T"} - Port Broadcast Threshold Exceeded. | CsPCause/Prob000d0122<br><br>This trap will be generated when the broadcast (packets per time interval) has been exceeded for the given port. |

**Table 4-1. NBR-620 Events and Alarms (Continued)**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event000d0125<br><br>{d "%w- %d %m-, %Y - %T"} -<br>System Voltage Low condition has been detected by {m} ({t}). | CsPCause/Prob000d0125<br><br>The internal 5 volt line of the system is low. The voltage low condition indicates that either the power supplies are failing or there is not enough power available to the host modules. This is a serious condition and should be addressed immediately. |
| CsEvFormat/Event000d0126<br><br>{d "%w- %d %m-, %Y - %T"} -<br>System Voltage Normal condition has been detected by {m} ({t}). | Not Applicable |
| CsEvFormat/Event000d0127<br><br>d "%w- %d %m-, %Y - %T"} -<br>An EPIM has been removed from port {I 3} on module in slot {I 1} of {m} ({t}). | CsPCause/Prob000d0127<br><br>An Ethernet Port Interface Module (EPIM) has been physically removed. |
| CsEvFormat/Event000d0128<br><br>{d "%w- %d %m-, %Y - %T"} -<br>An {T EPIMType 5} has been inserted into port {I 3} on module in slot {I 1} of {m} ({t}). | Not Applicable |
| CsEvFormat/Event000d0129<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Traffic threshold, {I 1} packets per {I 3} seconds exceeded on the repeater network {I 5} of {m} ({t}). | CsPCause/Prob000d0129<br><br>The device(s) attached to this channel may have an application level problem. The attached devices may be operating properly but the application requires a large amount of network bandwidth. If the application requires a large amount of network bandwidth, then a bridge or router may be used to logically separate various network segments. This trap indicates that module or port level thresholds on this repeater channel are needed to pinpoint high bandwidth users. |
| CsEvFormat/Event000d0130<br><br>{d "%w- %d %m-, %Y - %T"} -<br>Error threshold exceeded. An error threshold of, {I 1}% good packets in {I 5} seconds, exceeded on repeater network {I 7} of {m} ({t}). | CsPCause/Prob000d0130<br><br>A user defined threshold has been exceeded on this channel. This threshold could indicate that a malfunctioning device is present on this channel or that a cable fault exists. A module or port level threshold should be set to further troubleshoot to the offending node. |

**Table 4-1. NBR-620 Events and Alarms (Continued)**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event000d0131<br><br>{d "%w- %d %m-, %Y - %T"} - Collision threshold exceeded. Collisions exceeded {I 1}% good packets in {I 3} seconds on repeater network {I 5} of {m} ({t}). | CsPCause/Prob000d0131<br><br>A user defined threshold has been exceeded on this channel. This threshold could indicate that a malfunctioning device is present on this channel or that a cable fault exists. Collisions are usually caused by many nodes contending for the network. As traffic rates increase, the collision rate usually follows. Thus, if this channel has a high bandwidth utilization, a high collision rate is not unlikely. Use module and port level thresholds to further troubleshoot to a device level. |
| CsEvFormat/Event000d0132<br><br>{d "%w- %d %m-, %Y - %T"} - Network port security lock has been {I 1} on repeater network {I 3} on {m} ({t}) | CsPCause/Prob000d0132<br><br>The network administrator has changed the status of port locking for this repeater channel. The security feature locks all ports on this repeater channel so that only a valid user already in the source address table can access the network. |
| CsEvFormat/Event000d0133<br><br>{d "%w- %d %m-, %Y - %T"} - Repeater Broadcast Threshold Exceeded. | CsPCause/Prob000d0133<br><br>This trap will be generated when the broadcast (packets per time interval) has been exceeded for the repeater. |
| CsEvFormat/Event000d0136<br><br>{d "%w- %d %m-, %Y - %T"} - ChBoard Insertion, A module has been inserted into slot {I 1}. | CsPCause/Prob000d0136<br><br>A module has been inserted into this hub. |
| CsEvFormat/Event000d01a0<br><br>{d "%w- %d %m-, %Y - %T"} - A Port Interface Module has been inserted into port {I 3} of interface {I 1} on {m} ({t}). | CsPCause/Prob000d01a0<br><br>A Port Interface Module has been physically inserted. |
| CsEvFormat/Event000d01a1<br><br>{d "%w- %d %m-, %Y - %T"} - A Port Interface Module has been removed from port {I 3} of interface {I 1} on {m} ({t}). | CsPCause/Prob000d01a1<br><br>A Port Interface Module has been physically removed. |

**Table 4-1. NBR-620 Events and Alarms (Continued)**

| Event Message | Probable Cause Message |
|---|---|
| CsEvFormat/Event000d01a2<br><br>{d "%w- %d %m-, %Y - %T"} - Network configuration change reported by {m} ({t}). Device linked to port {I 3} on interface {I 1}. | CsPCause/Prob000d01a2<br><br>A device supporting link integrity, fiber optic or twisted pair, has made a valid connection (link) to this port. |
| CsEvFormat/Event000d01a3<br><br>{d "%w-%d %m-, %Y - %T} - Port {I 3} on interface {I 1} of {m} {t}, has unsegmented. | CsPCause/Prob000d01a3<br><br>A device previously linked with this port has been removed, powered down, or the cable segment has a fault. |
| CsEvFormat/Event000d0351<br><br>{d "%w- %d %m-, %Y - %T"} - Front panel redundant port {I 1} has been activated by device {m} of type {t}. | CsPCause/Prob000d0351<br><br>A new port has been activated for the front panel redundant circuit. This does NOT indicate this port is usable, but is being tested. |

# Index

## Symbols



## A



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## D

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## F



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## K



## L

## L (continued)



## M



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## O

## P



## R



## S

## S (continued)



## T



## U



## V



## W



## X



## Y

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